5.0 Before and After Studies

'Before and After' analyses were conducted to estimate the effectiveness of safety improvements implemented at high-crash intersections. The evaluations were conducted at 18 locations in which countermeasures recommended in previous studies have been implemented and adequate time has elapsed to obtain a clear picture of the intersection crash pattern following the safety improvements. The intersections for which 'Before and After' studies were completed are displayed in **Table 22** below:

Table 22 – 'Before and After' Study Intersections

	Intersection	Improvement Completion Date
1.	27th & 'O' Street	Summer, 2004
2.	27th & Highway 2	Summer, 2004
3.	10th & 'A' Street	February 7, 2003
4.	33rd & Sheridan	July 1, 2002
5.	40th & Sheridan	August, 2004
6.	70th Street & 'O' Street	October 24, 2003
7.	Touzalin & Fremont	December 26, 2002
8.	10th & 'N' Street	October 1, 2002
9.	17th & Cornhusker	December 2, 2004
10.	70th Street & Pioneers	May 17, 2002
11.	27th Street & Woods	August 12, 2003
12.	44th Street & 'J' Street	August, 2002
13.	27th Street & Vine Street	June, 2000
14.	Fletcher Avenue & Highway 34	December 23, 2002
15.	10th Street & 'Q' Street	October 1, 2002
16.	Pioneers Blvd. & Stacy Lane	July 13, 2004
17.	Whitehead Drive and Telluride Dr.	January, 2004
18.	W Street and 26th Street	January, 2005

It should be noted the pre-implementation (before) and post-implementation (after) analysis periods were the same duration, occurring during similar months to account for seasonal and weather-related crashes.

The 'Before and After' analyses included a comparison of the number of crashes at each intersection immediately before and after the implementation of the safety improvement. Additionally, other measures of crash frequency and severity were calculated, including the pre- and post-implementation crash rate, EPDO rate, and EPDO number. A benefit-cost analysis was also performed for each intersection to determine if the safety improvements are cost effective. The evaluation was made with respect to the benefits associated with reduced crash frequency and severity versus the actual costs of countermeasure implementation. The detailed analyses of each of the above locations are as follows:

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